

## ABSTRACT

A method of forming a gel and/or powder of a metallic oxide, metalloid oxide and/or a mixed oxide or resin thereof from one or more respective organometallic liquid precursor(s) and/or organometalloid liquid precursor(s) by oxidatively treating said liquid in a non-thermal equilibrium plasma discharge and/or an ionised gas stream resulting therefrom and collecting the resulting product. The non-thermal equilibrium plasma is preferably atmospheric plasma glow discharge, continuous low pressure glow discharge plasma, low pressure pulse plasma or direct barrier discharge. The metallic oxides this invention particularly relates to are those in columns 3a and 4a of the periodic table namely, aluminium, gallium, indium, tin and lead and the transition metals. The metalloids may be selected from boron, silicon, germanium, arsenic, antimony and tellurium. Preferred metalloid oxide products made according to the process of the present invention are in particular oxides of silicon including silicone resins and the like, boron, antimony and germanium.